Contents Volume 113

Trace and minor element partitioning between garnet and amphibole and carbonatitic melt	
R.J. Sweeney, D.H. Green and S.H. Sie	1
Finite duration extension and decompression melting	
T. Pedersen and H.E. Ro	15
Induced compositional layering in a convecting fluid layer by an endothermic phase transition	
S.A. Weinstein	23
Focused mantle upwelling beneath mid-ocean ridges: evidence from seamount formation and isostatic compensation of	
topography	
D.S. Wilson Provenance and U-Pb geochronology of the Mesoproterozoic Belt Supergroup (northwestern United States): implications for age of deposition and pre-Panthalassa plate reconstructions	41
G.M. Ross, R.R. Parrish and D. Winston	57
Paleomagnetic study of Cretaceous rocks from the Yangtze block, central Yunnan, China: implications for the India-Asia collision	5,
S. Funahara, N. Nishiwaki, M. Miki, F. Murata, Yi. Otofuji and Y.Z. Wang	77
Documentation of Neogene regional metamorphism in the Himalayas of Pakistan using U-Pb in monazite	
H.A. Smith, C.P. Chamberlain and P.K. Zeitler	93
Sr, Nd, and Pb isotopes of ultramafic xenoliths in volcanic rocks of Eastern China: enriched components EMI and EMII in subcontinental lithosphere	
M. Tatsumoto, A.R. Basu, H. Wankang, W. Junwen and X. Guanghong	107
Rare gases in Samoan xenoliths	
R.J. Poreda and K.A. Farley	129
The effect of fluid chemistry on quartz microcrack lifetimes	1.45
S.L. Brantley	145
The morphotectonic evolution of rift-margin mountains in central Kenya: Constraints from apatite fission-track ther- mochronology	157
D.A. Foster and A.J.W. Gleadow Transport and burial rates of ¹⁰ Be and ²³¹ Pa in the Pacific Ocean during the Holocene period	157
Y. Lao, R.F. Anderson, W.S. Broecker, S.E. Trumbore, H.J. Hofmann and W. Wolfli	173
A unique high Mn/Fe microgabbro in the Parnallee (LL3) ordinary chondrite: nebular mixture or planetary differentiate	1/5
from a previously unrecognized planetary body?	
A.K. Kennedy, R. Hutchison, I.D. Hutcheon and S.O. Agrell	191
Sm-Nd isotopic dating of Proterozoic clay material: An example from the Francevillian sedimentary series, Gabon	
R. Bros, P. Stille, F. Gauthier-Lafaye, F. Weber and N. Clauer	207
Strontium alteration in the Troodos ophiolite: implications for fluid fluxes and geochemical transport in mid-ocean ridge hydrothermal systems	201
M.J. Bickle and D.A.H. Teagle	219
⁸⁷ Sr / ⁸⁶ Sr, ¹⁴³ Nd / ¹⁴⁴ Nd and REEs in Silurian phosphatic fossils	
C.J. Bertram, H. Elderfield, R.J. Aldridge and S.C. Morris	239
Evolution of terrestrial proto-CO ₂ atmosphere coupled with thermal history of the earth	
E. Tajika and T. Matsui	251
Intermediate depth seismicity in the Aegean defined by teleseismic data	
D. Hatzfeld and C. Martin	267
Temporal variation of the Hawaiian plume flux G.F. Davies	277
First resolution of flow through the Hunter Channel in the South Atlantic K. Speer, W. Zenk, G. Siedler, J. Pätzold and C. Heidland	287
The Foundation Seamounts: tectonic setting of a newly discovered seamount chain in the South Pacific	
J. Mammerickx	293
Helium, radon and manganese at the TAG and Snakepit hydrothermal vent fields, 26° and 23°N, Mid-Atlantic Ridge	
M.D. Rudnicki and H. Elderfield	307
Kinematics of the North American-African plate boundary between 28° and 29°N during the last 10 Ma: evolution of the	
axial geometry and spreading rate and direction	
H. Sloan and Ph. Patriat	323

South Atlantic hot spot-plume systems: 1. Distribution of volcanism in time and space	
J.M. O'Connor and A.P. le Roex	343
Temporal Sr-, Nd- and Pb-isotopic variations in the Siberian flood basalts: Implications for the plume-source characteristics	
M. Sharma, A.R. Basu and G.V. Nesterenko	365
The large 1956 earthquake in the South Aegean: Macroseismic field configuration, faulting, and neotectonics of Amorgos	
Island	
G.A. Papadopoulos and S.B. Pavlides	383
Closure temperatures of the Sm-Nd system in metamorphic garnets	
K, Mezger, E.J. Essene and A.N. Halliday	397
A study of strontium diffusion in K-feldspar, Na-K feldspar and anorthite using Rutherford Backscattering Spectroscopy	
D.J. Cherniak and E.B. Watson	411
Boron and boron isotopes in pore waters from ODP Leg 127, Sea of Japan	
HJ. Brumsack and E. Zuleger	427
A serpentinite ridge in a collisional paleomargin setting: the Beni Malek massif, External Rif, Morocco	
A. Michard, H. Feinberg, D. El-Azzab, M. Bouybaouene and O. Saddiqi	435
A test of the y method for evaluating the periodicity of cyclical sediments	
A. Woronow	443
Documenting the reliability and utility of the γ method as applied to cyclic sections using forward modeling	
M.A. Kominz and G.C. Bond	449
The sources and transport of Sr and Nd isotopes in the Baltic Sea	
P.S. Andersson, G.J. Wasserburg and J. Ingri	459
Strontium isotope stratigraphy of Kita-daito-jima Atoll, North Philippine Sea: implications for Neogene sea-level change	
and tectonic history	
S. Ohde and H. Elderfield	473
He and Sr isotopes in the Lau Basin mantle: depleted and primitive mantle components	
R.J. Poreda and H. Craig	487
Isotopic shifts in waters from geothermal and volcanic systems along convergent plate boundaries and their origin	
W.F. Giggenbach	495
Non-Darcian fluid flow during the Alleghenian Orogeny	176
A. Schedl	511
Origin of kimberlites and related magmas	
A.E. Ringwood, S.E. Kesson, W. Hibberson and N. Ware	521
Paleomagnetism of Lower Cretaceous rocks from east of the Liquine-Ofqui fault zone, southern Chile: evidence of small	221
in-situ clockwise rotations	
J. Cembrano, M.E. Beck Jr., R.F. Burmester, C. Rojas, A. Garcia and F. Herve	539
The nature of mantle neon contributions to Vienna Basin hydrocarbon reservoirs	557
C.J. Ballentine and R.K. O'Nions	553
C.S. Dalletinine and N.A. O (1901)	33.
Express Letters	
The record of sea water ¹⁸⁷ Os/ ¹⁸⁶ Os variation through the Cenozoic	
W.J. Pegram, S. Krishnaswami, G.E. Ravizza and K.K. Turekian	569
Author Index Volume 113.	573
Author Higgs Youthle 115	3/1

